# NOTES AND STATISTICS

ON

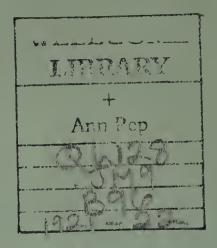
# VACCINATION IN BURMA

FOR THE YEAR 1921-22



## RANGOON

OFFICE OF THE SUPERINTENDENT, GOVERNMENT PRINTING, BURMA
1922



### LIST OF AGENTS

FOR THE

### SALE OF GOVERNMENT PUBLICATIONS.

#### IN INDIA:

AMERICAN BAPTIST MISSION PRESS, Rangoon.

RANGOON TIMES PRESS, Rangoon.

MAUNG LU GALE, Law Book Depot, 42, Ayo-o-gale, Mandalay.

THACKER, SPINK & Co., Calcutta and Simla.

W. NEWMAN & Co., Calcutta.

BUTTERWORTH & Co. (India), Ltd., Calcutta.

INTERNATIONAL BUDDHIST BOOK DEPOT, 4, Chandney Chowk 1st Lane, Calcutta.

THACKER & Co., Ltd., Bombay.

\* D. B. TARAPOREVALA, SONS & Co., Bombay.

HIGGINBOTHAM & Co., Madras.

MANAGER, THE "HITAVADA," Nagpur.

#### IN ENGLAND:

Henry S. King & Co., 65, Cornhill, E.C.

A. Constable & Co., 10, Orange Street, Leicester Square, W.C.

Kegan Paul, Trench, Trubner & Co., Ltd., 68—74, Carter Lane,
E.C., and 39, New Oxford Street, W.C.

Bernard Quaritch, 11, Grafton Street, New Bond Street, W.

P. S. King & Son, 2 & 4, Great Smith Street, Westminster, S.W.

Grindlay & Co., 54, Parliament Street, S.W.

T. Fisher Unwin, Ltd., 1, Adelphi Terrace, W.C.

W. Thacker & Co., 2, Creed Lane, Ludgate Hill, E.C.

Luzac & Co., 46, Great Russell Street, W.C.

Wheldon & Wesley, Ltd., 28, Essex Street, Strand, W.C.

Oliver & Boyd, Tweeddale Court, Edinburgh.

E. Ponsonby, Ltd., 116, Grafton Street, Dublin.

B. H. Blackwell, 50 & 51, Broad Street, Oxford.

Deighton, Bell & Co., Ltd., Trinity Street, Cambridge.

#### ON THE CONTINENT:

ERNEST LEROUX, 28, Rue Bonaparte, Paris, France.

MARTINUS NIJHOFF, The Hague, Holland.

OTTO HARRASSOWITZ, Leipzig, Germany.

R. FRIEDLANDER & SOHN, II, Carlstrasse, Berlin, Germany.

\* For the sale of official publications excluding those of the Legislative Department of the Government of Burma.



#### TABLE OF CONTENTS.

## NOTES AND STATISTICS ON VACCINATION IN BURMA FOR THE YEAR 1921-22.

				PARA.	PAGE
Vaccination Establishment	•••	•••		ī	I
Vaccination Work performed d	uring the	year		_ 1	ib.
Primary Vaccination Work	•••		• • •	3	ib.
Revaccination Work	•••	1 + 6	•••	4	2
Results of Vaccination	•••		••	5	ib.
Vaccination in Towns	•••	•••		6	3
Infant Vaccination in Towns		,		7	is.
Dispensary Vaccination	•••	***		8	ib.
Vaccination in Jails		•••	•••	9	ib.
Vaccination by Private Practiti	oners	***	• • •	10	ib.
Steamer Vaccination		•••	• • •	11	ib.
Verification of Results	•••	***	• • •	13	ib.
Vaccine Depôts, Meiktila and F	Rangoon	• • •	•••	13	4
Training Class		• • •	•••	14	ib.
Cost of the Vaccination Department	nent	•••	• > •	15	ib.
General remarks			•••	16	ib.

#### CORRECTIONS.

(1) Page 1, paragraph 2, line 6.—Read 54,329 for 54,339, and page 2, paragraph 5, line 2, 58.46 for 58.40.

(2) Page 3, paragraph 8, "Dispensary Vaccination."—Substitute the following for the second sentence beginning with "No dispensary vaccination"

and ending with "Thayetmyo" in the sixth line:

"No dispensary vaccination was performed in the following districts: Akyab, Sandoway, Pegu, Prome, Pyapôn, Toungoo, Thatôn, Tavoy, Mergui, Salween, Bhamo, Putao, Yamèthin, Kyauksè, Myingyan, Lower Chindwin, Sagaing, Thayetmyo and Minbu."

(3) Page 3, paragraph 12, first line.—Read 655,829 for 474,845.

Digitized by the Internet Archive in 2019 with funding from Wellcome Library

## NOTES AND STATISTICS

ON

## VACCINATION IN BURMA

### FOR THE YEAR 1921-22

1. Establishment.—The vaccination staff employed during the year 1921-22 as compared with that of the year 1920-21 is shown in the subjoined table:—

			Supervising O	fficers.		
Year		District Superintendents of Vaccination.	Sub-Assistant Surgeons,	Supervisors of Vaccination.	Head Vaccinators.	Vaccinators.
1920 21	• •	41	29	46	3	347
1921-22	• • •	41	35	46	3	337

The cadre of Sub-Assistant Surgeons who were receiving vaccination allowance or who were otherwise employed in the Vaccination Department was supplemented by six, four being appointed supervisors in Rangoon Municipality and one in Moulmein. The Sub-Assistant Surgeon in charge of Ye Hospital drew

vaccination allowance during the year.

The permanent establishment of vaccinators was increased by one as the result of the creation of four new appointments, two in Shwebo district and one each in the Northern and Southern Shan States districts, and of the abolition of three appointments, two in Rangoon Municipality, and one in Mergui town. Eight temporary appointments in Mandalay city and three in Yamèthin district were abolished. Eight district vaccinators, viz., two each from Bassein and Lower Chindwin districts and one each from Minbu, Ma-ubin, Toungoo, and Henzada districts, were either removed or dismissed from the service.

The Supervisors staff suffered loss by the death of one Supervisor (Hanthawaddy district), the resignation of two (Kyaukpyu and Pegu districts), and the removal of the Supervisor of Minbu district for desertion of his post. The Supervisor of Magwe district was placed under suspension late in March 1922

for neglect of his duties.

- 2. Vaccination Work performed.—The total number of operations performed exclusive of vaccination work in jails and dispensaries was 650,140 as against 670,425 in the previous year, a fall in total operations of 20,285; primary vaccination showing an increase of 9,668 operations, and re-vaccination a decrease of 29,953. The deficit on last year's figure for totals is mainly due to the great reduction in the number of re-vaccinations in Yamèthin district (less by 54,329 owing to the close of the special vaccination campaign), but this loss was partly recouped by an increase of 20,557 re-vaccinations in Akyab district, of 6,626 in Lower Chindwin district, 5,187 in Kyaukpyu district, and 4,739 in Kyauksè district.
- 3. Primary Vaccination.—Twenty-seven districts show an increase in numbers primarily vaccinated, and thirteen a decrease. In the Arakan Division Akyab district returned an excess output of 4,186, in addition to the great increase in re-vaccination already mentioned, and Kyaukpyu an increase of 748, while Sandoway showed a decrease of 841 primary operations. Great energy on the part of the district staff is responsible for the improvement in vaccination in Akyab district, where the outturn of primary operations, 19,794, was only equalled once in the previous ten years (1913-14). Vaccination work in Sandoway district has been badly reported on both by the Deputy Commissioner and the Civil Surgeon, and will receive special attention in the current

year. All districts of Pegu Division except Pegu district show an increase in primary vaccination, the falling off in Pegu district amounting to 957 operations. In Irrawaddy Division, Bassein district shows a large decrease of 5,705 primary cases, and Myaungmya district of 320; while Pyapôn district returned the very satisfactory increase of 7,050 cases. Four districts of Tenasserim Division return a deficit of primary operations, the decrease in Amherst district being 16,219, and Thatôn district 9,117. In the former district 39 cases of small-pox and in the latter 160 were reported, but these failed to exert the usual stimulus to increase vaccination work.

In Mandalay Division the total increase in primary vaccination was 6,917 in four districts, Bhamo showing a deficit of 1,197 cases. Mandalay district is responsible for the major part of the increase (5,828 excess operations); nearly all the excess operations (4,143) were performed in Mandalay city. Sagaing Division returns an increase in primary vaccination of 8,449 operations, shared in, but unequally, by all five districts, Shwebo, Lower Chindwin and the Chin Hills all showing an excess of over 2,000, the Upper Chindwin district of only 171 operations. Three districts of Magwe Division show an increase, Thayetmyo district alone having a deficit of 89 operations; the balance in the direction of excess being 3,414. In Meiktila Division there was a falling off of 2,996 primary operations, Yamèthin showing a decrease of 3,441 and Kyauksè district of 709. The highest increase was that of 748 in Myingyan district.

There was an increase of 2,331 primary operations in the Northern Shan

States, while the Southern Shan States shows a deficit of 156 operations.

Reviewing the figures given in detail above in the light of further information available, it is seen that much credit attaches to the work of the district vaccination staffs in Akyab, Tharrawaddy and Pyapôn districts for the improved outturn of primary operations, while most of the increase in Mandalay district is to the credit of the vaccination establishment employed in Mandalay city. In Pyapôn district the increase is 70 per cent. on the previous year's record, and goes a long way to wipe out the old record of inefficiency and sloth which attached to the vaccination staff of that district up to 1915. The progress made is illustrated by a comparison of the mean annual outturn of primary operations in the fiveyear's 1910-11 to 1914-15, viz., 3,573, with that for the following five-years 1915-16 to 1919-20— 8,846, and again with the figures for the year under review 17,727; another satisfactory feature of the year's work is the general increase of primary operations in Upper Burma districts, only 5 out of 20, or one-quarter, showing a deficit against 8 districts out of 20 in Lower Burma (Hill District of Arakan is excluded as returning precisely similar figures for the two years contrasted). The increase of 17,959 primary operations in the Upper Burma districts compares favourably with the deficit of 8,291 in Lower Burma districts. but the analysis shows that the bulk of this deficit has to be credited to two districts of the Tenasserim Division and one of the Irrawaddy Division.

4. Re-vaccination.— The large increase in the numbers of this class of operation performed in Akyab, Kyaukpyu and Lower Chindwin districts, and the great decrease in Yamèthin district have already been adverted to in paragraph 2. Ten districts in all in Lower and ten in Upper Burma return an increased output in re-vaccination, and eleven in Lower Burma and ten in Upper Burma return a The stimulus resulting from the prevalence of small-pox was lacking in most districts, and no doubt this is responsible for a falling off in re-vaccination where this was registered, but, per contra, there was little or none in those districts which showed a great increased output of re-vaccination,—and there was a notable degree of prevalence of small-pox in some districts, e.g. Amherst, Thaton and Sagaing, which failed to reach the previous year's record. In Kyaukse district a laudable attempt to carry out a re-vaccination campaign without increase of staff resulted indeed in achieving some 4,739 additional re-vaccinations, but was probably responsible for the falling off of 709 in primary vaccination. It is not surprising that the cessation of the vigorous vaccination campaign in Yamethin district was marked not only by an enormous decrease in re-vaccinations (from 57,012 in 1920-21 to 2,683 in 1921-22), but also by a decrease of 3,441 primary operations.

5. Results of Vaccination.—The percentage of successful cases of which the results were known was in primary vaccination 98.07, in re-vaccination 58.46, as against 97.48 and 55.70 respectively in 1920-21. In the case of primary operations the highest percentage success accrues to Sagaing, Pyapon and

Tharrawaddy districts, which returned 99.87, 99.85, and 99.83 per cent. respectively. Pegu Division as a whole with a ratio of 99.30, gave the highest percentage of successful primary cases, and the Shan States the lowest with 96.36 per cent. Mergui, as in last year, returned a low primary success ratio of 83.44 per cent. The Civil Surgeon states that owing to the difficulty of communications it has been impossible on many occasions to use the lymph within the prescribed period.

The highest percentage of successful re-vaccinations was returned by Kyauksè with 90'35 per cent. Upper and Lower Chindwin gave returns of 84'62

and 83.51 respectively.

6. Vaccination in Towns.—In 60 towns in which vaccination has been made compulsory 41,110 primary and 46,208 re-vaccinations were performed during the year, an increase over last year's figures of 5,158 in the case of the former operation and 9,992 in the case of the latter. The percentages of successful primary operations and re-vaccinations were respectively 98.64 and 59.46 as against 98.42 and 54.24 respectively in 1920-21. Twenty towns show a decrease in primary work, the most conspicuous being Myaungmya with 191 against 683, Kawkareik with 188 against 767, Kyaikto with 86 against 299 and Bassein with 1,122 against 1,765.

7. Infant Vaccination in Towns.—Among towns in which a large number of infants remained unprotected at the end of the year were Kyaikto with 56.6 per cent., Kyaukpyu with 60.3 per cent., Sandoway with 61.1 per cent., Wakèma with 70.4 per cent., Kawkareik with 50.4 per cent. There is evidence in the recent census returns that in many towns only about half of the children born are registered, the intercensal increase corresponding to a birth-rate averaging about 50.00 per mille, while the registered birth-rate averages 25.00, and it must therefore be assumed that the actual state of infant vaccination in some of these towns is

even worse than the above figures indicate.

8. Dispensary Vaccination.—The total number vaccinated in dispensaries amounted to 5,810, representing an increase of 1,585 in primary operations and a decrease of 18 in re-vaccinations. No dispensary vaccination was performed in the following districts: Akyab, Sandoway, Pegu, Pyapôn, Toungoo, Thatôn, Tavoy, Mergui, Bhamo, Putao, Yamèthin, Kyauksè, Myingyan, Lower Chindwin and Thayetmyo. Kyaukpyu district shows an increase of 290 dispensary operations; Tharrawaddy district of 815 primary and 989 re-vaccinations; and in Myitkyina district the increase was 677 total operations. All districts in Magwe Division and all except Shwebo in Sagaing Division show a falling off in dispensary vaccination.

9. Vaccination in Fails.—In Jails and Jail Hospitals 7,000 primary operations and 25,652 re-vaccinations were performed in an average population of 17,194. The percentage of successes in the case of primary operations was 53.59 and of re-vaccinations 55.24 per cent. It is probable that nearly all so-called primary operations were performed on previously protected persons.

7,294 operations, of which 3,589 were primary cases with 91.53 per cent. of successes. The results of 227 primary operations and 2,549 re-vaccinations were

unknown.

11. Steamer Vaccination.—In the port of Rangoon 18,366 passengers on arrival by steamer from the various Indian ports were vaccinated, but, with the exception of two, the results of none of these cases could be verified. The Civil Surgeon, Akyab, states that immigrants and crews who arrived at the port by

three ships with cases of small-pox on board were vaccinated.

the year, the Civil Surgeons and Health Officers claim to have inspected the results of 54,162 or 10'94 per cent. primary cases, and 19,411 or 12'06 per cent. re-vaccination cases; while the Supervisors of Vaccination verified 276,121 or 55'80 per cent. primary, and 71,603 or 44'48 per cent. re-vaccinations. The amount of verification work performed by the former class of officers was almost the same as in the previous year; the Civil Surgeon, Lower Chindwin district, neads the list with 59'49 per cent. verified primary and 42'88 per cent. verified re-vaccination cases to his credit. Other Civil Surgeons who have done a creditable amount of inspection work were those of Meiktila (46'75 per cent.), Kyauksè (38'41 per cent.), Tavoy (37'28 per cent.), and Yamèthin (30'86 per cent.), all primary cases. The Civil Surgeon, Thayetmyo, did not inspect a single case of vaccination during the year. Supervisors of Vaccination who report having done the highest amount of verification work are those of the Southern Shan States (91'41), Tavoy (85'09), Insein (83'81), Meiktila (83'60), Rangoon (81'98), and Pyapôn (81'38).

Relatively poor work was performed by the two supervisors employed in Henzada district; their circles of supervision were limited to a subdivision only, but they only verified between them 42.07 per cent. of primary operations and 9.17 per cent.

of re-vaccination cases.

13. Vaccine Depots, Meiktila and Rangoon.—The total number of calves inoculated in the Meiktila Depôt during the year was 305 as compared with 376 in 1920-21. Of this number, 25 calves either failed to re-act or yielded lymph of poor quality which was rejected. Ten other calves were rejected as they developed foot and mouth disease. The average yield per successfully inoculated calf was 26'35 grammes as compared with 28'1 in 1920-21.

The issue of lymph to Superintendents of Vaccination and others totalled 899,460 doses against 951,108 in the previous year. Out of 375,955 primary vaccinations, of which the results were reported to the Depot 98'20 per cent.

were returned as successful against 97'62 in 1920-21.

The Director has again called attention to the great wastage of lymph supplied to various officers in the districts. The places where a great wastage occurred were Sandoway, 44'40 per cent., Prome 35'93 per cent., Bassein 38'21 per cent., Mayinyo 45'13 per cent., Upper Chindwin 53'16 per cent. and Kutkai, in Northern Shan States, 57'43 per cent. The attention of the responsible officers in these places has been drawn to this wastage and they have been asked to pay attention to the matter and to indent for no more than the actual

quantity required.

The total cost of the Depôt during the year was Rs. 31,436-6-11 as against Rs. 22,238-0-11 in the previous year. A sum of Rs. 2,799-5-11 which was realised from the sale of calves was refunded to the Treasury; the nett expenditure therefore amounted to Rs. 28,637-1-0 or an increase of Rs. 10,317-3-5 on that of the previous year. The large increase was due to the revision of pay and allowances of the staff employed in the Depôt, which was sanctioned with effect from the 1st March 1920, including arrears. In addition a larger number of apprentice vaccinators on an enhanced rate of stipend was trained in the Depôt than in the last year. The cost of manufacture of each dose of lymph was 5.85 pies as against 3'70 pies in the previous year.

14. Training Class.—Five Supervisors of vaccination and 71 Apprentice Vaccinators were trained during the year. One Supervisor was still under training

at the close of the year.

In the Rangoon Depôt 29,336 grains of pulp were obtained from 62 inoculated calves, or an average yield of 468'32 grains per calf. The percentage

of primary cases returned as successful was 99'73.

15. Cost of the Vaccination Department.—The total cost of the Vaccination Department during the year was Rs. 3,16,417-10-2 against Rs. 2,58,101-6-7 last year or an increase of Rs. 58,316-3-7. The increase was chiefly due to the raising of pay of the vaccinators, in all the districts except Northern and Southern Shan States, from Rs. 20—1—30 to Rs. 30—1—50 with effect from the 1st March 1920, whereon all of them drew arrears of pay during the year under report. Consequent on the rise in their pay the travelling allowance drawn by the district vaccinators also automatically increased. The average cost of each successful case of vaccination was Re. 0-9-7 as against Re. 0-7-9 in the last year. district of Lower Chindwin returned the lowest cost per case of successful vaccination (Re. 0-3-6). Next comes Kyaukpyu with Re. 0-4-5, Akyab Re. 0-4-8; Sagaing Re. 0-5-3; Tharrawaddy Re. 0-6-1; Kyauksè Re. 0-6-5; and Ma-ubin Re. 0-6-8. The districts from which the highest cost per successful case was returned were Hill District of Arakan Rs. 2-0-10 and Mergui Rs. 1-0-7. The cost per case in other districts ranged from Re. 0-7-0 in Minbu to Re. 0-14-2 in Insein.

16. General Remarks.—Captain Aung Tun, B.A., M.B., Ch.B., was in charge of the Vaccine Depôt, Meiktila, throughout the year. Assistant Director S. Muthuswamy lyer relinquished charge of his duties on the 19th June 1921 on transfer to the Medical Department and Sub-Assistant Surgeon Man Singh assumed charge as Assistant Director from that date. These officers all carried out their duties efficiently and the successful results obtained are to their credit.

> C. E. WILLIAMS, LIEUT.-COL., I.M.S., M.D., D.P.H., D.T.M.,

Superintendent-General of Vaccination, Burma.

RANGOON, 29th May 1922.

# APPENDICES.

									PAGE
STATEMENT	No. I-Showin	ng particul	ars of va	ccination in	the Pro	vince of B	Burma d <b>ur</b>	ing the	
	year 1921-22		••		•••	• • •	•••	•••	6 & 7
STATEMENT	No. II—Showi	ng the cos	t of the V	accination	Departme	ent in the F	rovince of	Burma	
	during the yea			•••	•••	•••	•••	•••	10 & 11
STATEMENT	No. III—Show	wing Disp	ensa <b>ry</b>	Vaccination	in the	Province o	f Burma	for the	
	year 1921 22		•••	•••	•••	•••	•	•••	12 & 13
STATEMENT	No. IV—Show	ving the r	number (	of persons p	rimarily v	vaccinated	and the	number	
	of those persor	is who we	re success	fully vaccin	ated in th	e Province	of Burma	in each	
	of the official				•••	•••	••• ~	•••	14 & 15
STATEMENT	No. V-Show	ing partic	culars of v	accination	verified by	Inspecting	g Officers	during	
	the year 1921-		•••	•••	•••	•••	•••	•••	ib.
APPENDIX A	A-Showing the	e ratio pe	er 10,000	successfull	y vaccina	ted and th	e mortalit	y from	
	small-pox by						•••	•••	16
APPENDIX 1	B-Statistics r	elating to	the num	ber of chil	dren und	ler one yea	r of age i	n towns	
	available for v	accination	and the	number o	f successf	ul operation	ons perform	ned on	
	them	•••	•••	•••	•••	• • •	•••	•••	ib.
APPENDIX	C—Diagram	showing ti	he propo	ortion of p	opulation	during	the seven	official	
	years 1915-1	6 to 1921-2	2, and th	e death-rai	e from sn	nall-pox du	ring the c	alendar	
	year 1931 in d	listricts wh	nere regis	tration of v	ital statist	ics is in tor	ce		17

## STATEMENT No. I-Showing the particulars of Vaccination in the

No	Districts,	Population of districts according to census of 1921.	Average population per square mile.	Average number of vacci nators employ ed through out the year.	Total 1	number o	f persons	Averag numbe of per- sons vacci- nated by each vacci- nator,	Total		Successi	d Total of all	Un- known,
(1)	(2)	(3)	(4)	(5)		(6)		(7)	(8)	(9)	(10)	(11)	(12)
_					Males.	Female	s Total.						
1 2 3 4	I selected to	576,430 20,914 199,873 112,029	113 14 46 30	11 2 6 4	25,584 596 8,216 2,809	16,066 367 9,011 2,562	963 17,257	3,786 482 2,876 1,343	19,79 4 519 11,570 4,365	3,870 8 1,556 374	116 4,932	452 10,8t7	2,360 4 285 5)1
	Total	9(9,246	61	28	37,205	29,036	65,241	2,837	30,248	5,803	16,669	32,065	3,160
5 6 7 8 9	Insein Hanthawaddy Pegu Tharrawaddy	341,962 293,083 364,624 445,620 492,129 371,575	12,213 150 214 108 173 127	15 6 8 8 8 12	18,767 6,032 7,311 9,188 11,928 7,948	5,659 6,837 7,203 9,295 12,872 8,289	24,426 12,869 14,414 18,483 24,80 16,237	1,371 2,145 1,892 2,066 3,1 0 1,353	8,686 11,959 12,757 16,50 <b>3</b> 20,325 13,980	2,758 3,045 4,933 4,654	6,656 7,878 7,500 11,763	11,650 12,528 15,634 18,940	693 257 175 799 1,353 656
	1	2,309,293	170	57	61,074	50,155	111,229	1,848	81,210	26,009	42,676	79,717	3,932
11 19 13 14 15	Pyapôn Bassein Henzada Myaungmya	330,106 288,994 489,473 550,920 37',561	201 135 113 194 140	9 10 14 14 15	10,5,0 9,011 12,5,2 14,163 10,908	10,680 9,833 12,354 15,103 8,862	15,814 24,935 29,266 19,770	2,363 1,884 1,781 2,090 1,318	18,662 17,727 19,824 27,310 15,7(8	4,622 4,194 3,510 7,833 2,234	12,871 10,200 14,976 7,517	17,184 15,549 26,333 15,132	315 517 838 882 464
	Total TENASSERIM DIVISION	2,030,644	151	62	57,254	56,832	114,086	1,840	99,321	22,323	56,163	95,430	3,016
16 17 18 19 20	Amherst Tavoy	417,910 156,786 195,465 381,883 471,100 50,379	59 30 14 62 98 19	13 6 5 13 12 2	17,569 4,342 3,566 10,138 11,797 1,317	10,330 4,475 3,806 9,483 11,657 769	33,899 8,817 7,692 19,621 23,451 2,0-6	2,608 1,470 1,533 1,609 1,955 1,043	16,161 5,997 4,230 16,237 18,654 1,502	4,034 724 3,318 4,391 58	1,673 7,166 7,033 199	3,275 15,681 17,713 1,472	741 72 305 446 7J5
		. 1,613,523	45	51	49,049	46,520	95,569	1,873	62,781	16,918	24,314	59,183	2,279
22 23 24 25 26	Bhamo Katha Myitkyina	356,621 112,960 253,725 118,382 7,673	166 16 28 11 1	11 4 6 2	11,111 1,953 5,839 1,933 26	11,287 1,791 5,603 1,778	22,398 3,748 10,942 3,706 90	2,036 936 1,824 1,210	17,480* 2,89 <b>3</b> 8,839 3,494† 65†	1,858 112	3,973 1,374 6,253 921 13	13,444 2,480 8,134 3,130 40	3,822 301 571 317
	Total .	849,361	22	23	20,361	20,518	40,879	1,718	33,774	11,595	12,517	27,228	<b>5,</b> 011
27 28 29 30 81	Sagaing Lower Chindwin	179,245	68 179 99 12 14	10 7 6 6 3	7,831 9,994 11,979 4,:10 2,713	8,562 12,65 14,258 4,445 1,538	16,393 23,044 26,137 8,555 4,261	1,639 3,149 4,373 1,426 1,417	14,150 15,185 12,036* 8,051 3,763	653 139	9,426 7,600 3,173 5,443 1,204	13,471 15,038 11,965 7,819 2,539	216 138 14 58 1,142
	Total	1,850,896	40	32	36,627	40,853	77,480	2,431	53,185	19,146	26,995	50,827	1,558
82 88 84 85	Magwe Division.  Thayetmyo Pakôkku Minbu Magwe	485,814 274,302 423,252	54 49 83 115	8 10 7 8	6,849 11,895 5,267 6,637	6,352 11,902 5,236 7,152	13,201 23,797 10,503 13,789	1,650 2,330 1,500 1,724	9,629 18,383 10,344 12,874	2,457 9,074 4,126 7,081	5,202 7,155 4,239 5,398	8,89 <b>5</b> 17,291 9,021 12,479	313 6±6 737 96
	Total MRIRTILA DIVISION.	1,438,774	€8	38	30,648	39,642	61,290	1,857	51,230	22,738	21,994	47,686	1,792
36 37 38 89	Melktila Yamèthin Kyauksè Mylngyan	323,189 142,677	126 78 112 161	6 7 3 7	5,826 7,256 4,133 6,249	6,150 8,292 4,724 6,478	11,976 15,548 8,857 12,727	1,996 2,221 2,952 1,818	9,699 12,86 <b>5</b> 3,720 12,336	1,676 5,575 2,878 4,423	6,290 6 1) 6 599 5,807	9,323 13,390 3,542 11,569	235 907 69 252
	Total	1,197,771	115	23	23,464	25,644	49,1(8	2,135	38,520	14,252	18,802	35,924	1,463
40 41	SHAN STATES.  Northern Shan States Southern Shan States  Total	911,468	31 23 25	15 18 93	0,669 8,431 18,103	9,072 7,962 17,0 <b>3</b> 1	18,741 16,396 35,137	1,249 911 1,065	17,267 15,823 33,089	2.907 781 3,691	6,775 8,150 14,925	15,2 <b>17</b> 1 <b>4</b> ,706 29,923	1,457 579 2,086
		,											
	GRAND TOTAL	13,169,099	55	337	333,785	316,234	650,019	1,907	491,359*	142,480	235,085	457,983	24,247
		1 1										· /	

Note.—This statement does not include the figures for Dispensary

\* Secondary operations

† Work done by othe

## DEPARTMENT.

Province of Burma during the year 1921-22 (Paragraphs 2, 3, 4, 5 and 10).

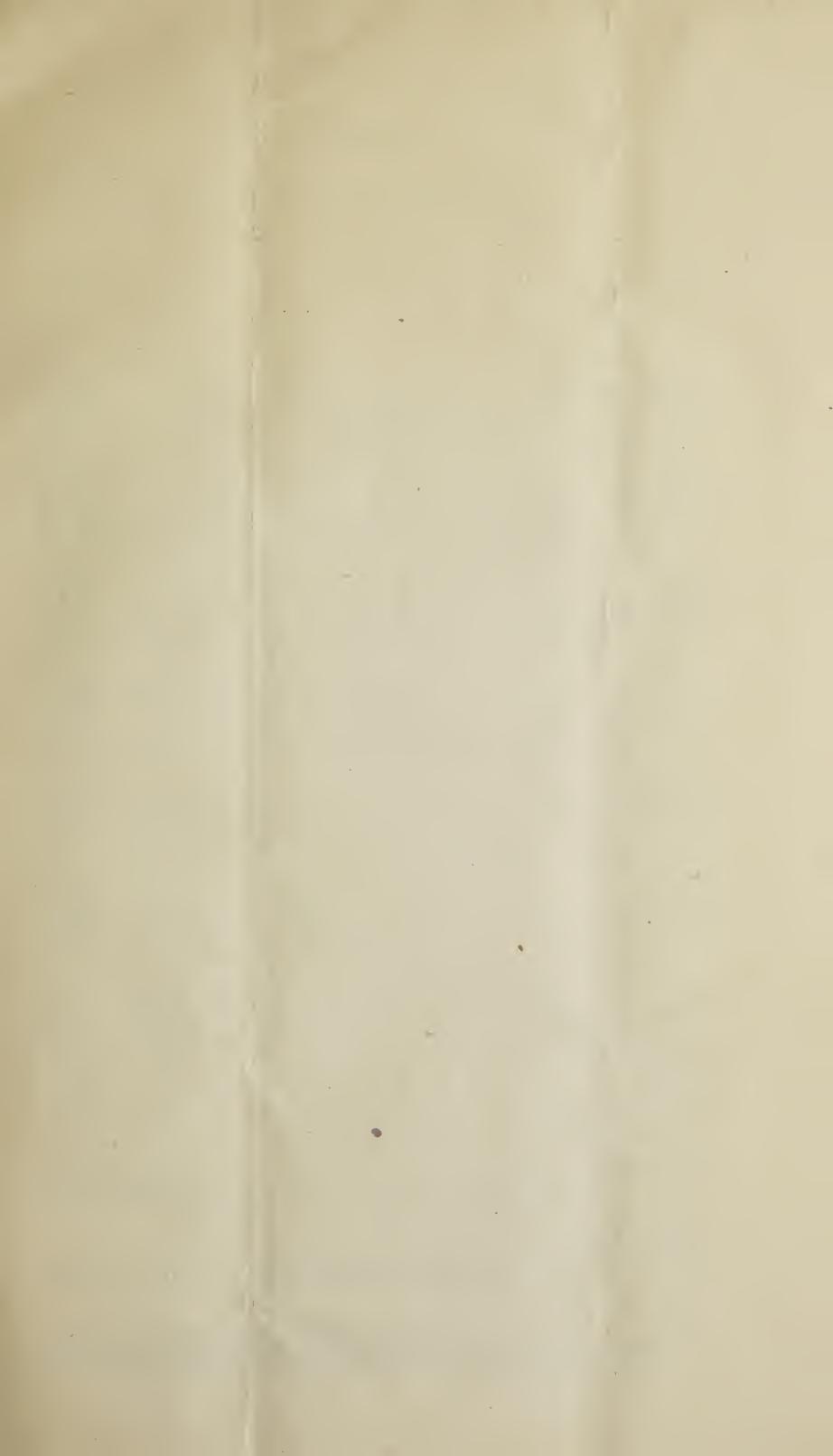
	,		R RESULTS	1,000 of popula-		CASES TO	PREVIOUS FI		VIOUS FIVE		
access- ful.	Un- known.	Primar <b>y.</b>	Re-vaccianation.	Persons successions that I,0 tion.	Primary.	Re-vacci- nation.	No.	Ratio per 1,000.	No.	Ratio per 1,000.	No
(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(
12,262 346 2,939 224	5,798 3 213 825	98·30 87·77 96·21 93·90	76•36 78•46 53•69 28•68	51·00 38·16 69·02 34·30	11.92 .77 2.46 11.71	26·53 •68 3·75 22·36	16,108 686 7,084 3,588	30.96 30.84 38.31 34.90	2  9 . 8	··· •05 •08	
15,771	6 <b>,2</b> 39	96.91	69.81	52.61	8.72	21.52	27,766	33.08	19	•02	
4,679 112 695 460 2,253 535	6,044 165 275 747 1,151 412	99·32 99·56 99·57 99·55 99·83 97·76	48·26 15·03 50·29 37·31 67·78 29·00	36·90 40·13 36·26 36·12 43·04 36·50	7.98 2.15 1.37 4.84 6.66 4.69	38,4) 18·13 16·60 37·73 26·72 18·25	17,828 10,623 12,174 13,617 20,560 13,1~9	60*77 40*05 86*61 36*30 47*45 34*81	246 18 50 41 8	*84 *07 *15 *11 *02 *01	
8,734	8,794	99.30	47.98	38.30	4.67	32.55	87,986	42.33	367	•18	
913 266 2,417 38 <b>5</b> 1,783	284 356 1,001 712 777	99·37 99·85 97·70 99·53 98·88	39-29 34-95 59-52 31-71 55-29	58*00 60*38 42*90 48*50 45*65	1.69 2.92 4.29 3.22 2.94	10°89 91°87 19°58 36°97 19°42	16,606 9,222 21,090 22,788 12,878	54·45 35°99 47·82 42·81 38·45	30 41 190 12 44	•10 •16 •43 •02 •13	
5,794	3,130	99.09	49.80	49.86	8.04	21.20	82,584	44.18	317	•17	
6,842 1,507 1,181 888 2,529 244	2,83 <b>6</b> 273 432 450 930	93.74	65.32	52.75 46.85 32.89 43.30 42.97 34.06	4·59 1·21 7·21 2·75 3·83	15:99 9:47 12:48 13:30 19:38	24,502 6,283 6,167 14,711 17,778 1,877	66.60 46.44 55.35 41.90 43.12 40.27	108 2 92 93 108 58	*28 *01 *88 *33 *14	3   3
13,191	4,921	97.92	47.23	44.85	3.63	14.98	71,32)	<b>5</b> 0•06	868	•27	7
2,083 487 734 91 17	1,107 121 249 38	98.33	39 <b>*</b> 59 52 <b>*</b> 30	43·54 26.27 34·95 27·21 7•43	21°91 10°40 6°46 9°07		3,089 8,211	56°65 28°65 33°43 21°91 12°32	247  	•74	1
3,412	1,515	98.19	61.21	36.07	15.31	18.61	83,123	32°77			-
1,421 4,542 11,504 407 222	766 ±50 ±3	99.87 99.72 97.76	74.56 83.51 84.62	38·06 59·88 68·45 45·89 25·08	.66	11·17 3·16 4·56	21,191 12,801 9,251		35 68 18 	·11 •22 •00	2
18,096	1,487	98.49	79.26	51.01	2.93	6.11	57,717	45.27	121	• 1	3
1,806 753 60 399	428 63	97•4 <b>9</b> 93•90	15.69 62.60	37·20 33·11	3·51 7·12	7·81 39·62	18,039 8,186	41.96 31.06	72 26 4 14		6 2 4
3,048	1,071	96-46	93.01	35.26	3.20	10.68	50,143	38.34	116	•0	9
1,303 1,141 4,129 100	559	95.25	53.72	38·77 51·47	7·05 1·85	20.83 11.04	3 41,462 4 4,655	135·24 32·91	11 1 172	•0	13
6,673	1,807	96.9	75.99	35.56	3.80	17.0	7 65,897	58.12	203	•1	8
771 296 1,067	86	3 96.4	8 55.02	16.46	3.66	6.2	7 15,815	17.57			_
75,786	29,15	3 98.0	58.46	40.5	3 4.9	18.3	6 501,61	41.30	1,757	7	18
	ful.  (14)  (14)  (14)  (2,262 346 2,939 224  15,771  4,679 112 695 460 2,253 535  8,734  913 266 2,447 385 1,783  5,794  6,842 1,507 1,181 888 2,529 244  13,191  2,083 487 781 91 17  3,412  1,421 4,542 11,504 4,542 11,504 11,504 11,604 11,604 11,604 11,604 11,604 11,604 11,604 11,0067  11,067	ful. known. (14) (15) (14) (15) (15) (14) (15) (15) (15) (15) (15) (15) (15) (15	ful. known. (14) (15) (16) (16) (16) (16) (16) (16) (16) (16	ful. known. Primary. nation.  (14) (15) (16) (17)  (14) (15) (16) (17)  (14) (15) (16) (17)  (14) (15) (16) (17)  (14) (15) (16) (17)  (15) (16) (17)  (16) (17)  (17) (18) (18) (17)  (18) (18) (18) (17)  (18) (18) (18) (18) (18) (18) (18) (18)	Cacess	Coccess   Un			Color   Colo		

vaccination which are shown separately in Statement III. included agencies included.

#### APPENDICES.

## Summary.

	Total no of per vaccing	sons	Total nu of opera perfor	tions	Percent successf in which were k	ul cases results	of pe		Numl children fully vac	per of success- cinated.	ssful vaccina- population.	nent.	h successfui
74 <b>(1)</b>	& Primary.	Re-raccination.	Primary.	@ Re-vaccination,	9 Primary.	S Re-vaccination.	S Vaccinators em-	Persons vaccina-  © ted by each vaccinator.	Under one year.	One year and in under six years.	Ratio of successive tions per 1,000 of po	E Total cost of Department.	Average cost of each case.
	487,649 3,601 8,589 494,839	155,076 2,209 3,705 160,990	487,770 3,601 3,589 494,960	2,209 8,705 160,990	98·07 98·68 97·71	58·44 56·57 61·83	337	1,907	142,369 698 111 143,173	233,980 1,563 1,105 236,848			Rs. A. P.



A.—VACCINATION

## STATEMENT No. II - Showing the cost of the Department in the

***		The second secon	sing									ENDITURE.	
No.	Distric	its.	European supervising officers.	Pay.	Native super- vising officers.	Pa <b>y.</b>	Vaccinators.	Pay.	Clerks.	Pay.	Peons, etc.	Pa <b>y.</b> •	Total payof establishment.
(1)	(8)	)	(3)	(4)	(5)	(6)	(7)	(8)	9)	(10)	(11)	(12)	(13)
	ARAKAN I	Division,		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.	Rs. A. P.
1 2 3 4	Akyab Hill Districts of A Kyaukpyu Sandoway	rakan Total	•••		2 1 1 4	840 0 0 175 0 0 900 0 0 1,915 0 0	11 2 6 4 23	1,229 12 0 2,141 0 0 1,490 11 0				••••	5,644 8 6 1,229 12 0 2,316 0 0 2,390 11 0
	Prou Di							3,500 20 0	-	******		•••••	
5 6 7 8 9	Rangoon Insein Hanthawaddy Pegu Tharrawaddy Prome	Total	•••		5 2 3 2 6 1	1,500 0 0 2,100 0 0 1,131 0 0 1,137 0 0 1,200 0 0 8,328 0 9	12	3,906 3 9 4,128 3 1 4,432 7 2 4,153 2 8 4,595 14 11	•••		4	809 0 0	4,901 9 5 6,006 8 9 5,259 8 1 5,569 7 11 5,413 2 8 5,795 14 11 82,945 9 9
11	IRRAWADDY 1	Division.			4	1 000 0 0		0.000 0 5	}				4,599 6 5
11 12 13 14 15	Ma-ubin Pyapon Bassein Henzada Myaungmya	Total	•••		4 3 4 5	1,990 0 0 1,243 2 0 1,742 12 6 1,330 0 0 1,300 0 0 7,605 14 6	14	3,114 8 11 7,002 9 4 7,611 13 7 5,555 1 6	•••	• • • • • • • • • • • • • • • • • • • •	•••	******	4,357 10 11 8,745 6 10 8,941 13 7 6,855 1 6 38,499 6 8
	TERASSERIM	Division.							-		~i		-
16 17 18 19 20 21	Amherst Tavoy . Mergui Toungoo Thatôn Salween		•••	**************************************	7 1 1 4 2	3,476 10 8 1,200 0 0 900 0 0 1,429 0 8 1,802 3 0	5 13	2,141 3 5 2,425 0 0 5,551 1 3 3,585 15 10			•••		9,872 7 8 3,341 3 6 3,325 0 0 6,980 1 11 6,388 2 10 535 2 7
		Total			15	8,807 14 4	51	30,134 4 1		•••••	•••		28,942 2 5
22 23 24 25 26	Mandalay Bhamo Katha Myltkyina Putao	Oivision	•••	******	1 2	900 0 0	11 4 6 2	1,577 10 1 2,382 12 0 1,341 9 0	•••		•••		6,552 13 7 1,577 10 1 4,542 12 0 1,841 9 0
		Total	***		3	3,060 0 0	23	10,954 12 8		4.001		*****	14,014 12 8
	SAGAING D	Division.											
27 28 29 30 31	Shwebo Sagaing Lower Chindwin Upper Chindwin Chin Hills				1 1 1 1	939 6 7 1,101 4 7 1,200 0 0 1,170 0 0	6 6 8	8,713 2 7 2,592 2 2 2,397 14 11 1,677 13 1					5,706 9 10 4,814 7 2 8,792 2 2 8,667 14 11 1,577 13 1 19,458 15 2
32			1		0	1,820 U O		2 000 E 11					5,302 5 11
33 34 85	Thayetmyo Pakôkku Minbu Magwe	Total	•••	00000 66 ·	2 1 2 3	1,200 0 0 836 10 9 770 0 0	10	5,317 5 6 .			1  1	274 8 0  274 8 0	
	MEIRTILA I	Division.											
36 37 38 39	Meiktila Yamèthin Kyauksè Myingyan Shan St		•••		1 2 1 3 7	906 10 10 1,220 0 0 600 0 0 640 0 0	7 3 7	3,546 14 9 1,691 0 0 2,928 14 0	•••	******	•••		3,604 15 1 4,766 14 9 2,291 0 0 3,568 14 0 14,231 11 10
40	Northern Shan St			*****	1	480 0 0					•••		6,291 6 9
41	Southern Shan Se	7D 4 1	•••	*****	6	1,465 0 0		5,259 5 0	1	600 0 0	8	1,210 12 4	
<b>42</b> <b>4</b> 3	Melktila Vaccine Office of the So General of Vacc	uperintendent-	a	1,800 0 0		2,117 8 7  45,173 6 11			(a) 	6,953 15 0		2,291 4 4	10,271 7 7
					Th					.,	10		

<sup>\*</sup> The average cost in this column is calculated on the total number of successful (6) No share of pay of the Superintendent, Vaccine Depôt, 2 Female Registrar-Vaccinators and 12 Assistant Registrar-Vaccinators of Rangoon (b) This includes 35 Snb-Assistant Surgeons who are receiving Vaccination allowance, or who have been appointed a whole-time Officer Vaccine Depôt, Meiktila 1 State official appointed by the Sawbwa of Hsipaw

DEPARTMENT.

Province of Burma during the year 1921-22 (Paragraph 15).

					PAID FROM				and		
Travelling allowance.	Contingen-	Total cost.	Imperial Funds.	Provincial Funds.	Local Funds.	Municipali- tles.	Native States.	Total.	Number of all successful vaccinations and re-vaccinations.	Average cost of each successful case.*	No.
(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
Rs. A. P.		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs. A. P.	
2,865 14 0 409 2 0	)·	1,638 14 0	•••••	1,638 14 0		*****		8,529 4 6 1,638 14 0	798	0 4 8 2 0 10	2
1,499 13 0 874 7 0		3,265 2 0	<b>t</b>	1,100 0 0		126 0 0	į.	3,834 0 6 3,265 2 0		0 4 5 0 13 7	
5,649 4 0	37 1 6	17,267 5 0		-2,738 14 0	13,005 5 0	1,523 2 0	*****	17,267 5 0	47,836	0 5 9	
423 3 6 4,238 11 0 3,789 1 0 4,506 13 6 2,462 1 3 2,321 0 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10,338 15 3 9,248 5 7		617 9 5	9,451 9 10 8,567 2 1 9,249 13 5 7,390 3 11 6,410 14 11	681 3 6 1,090 0 <b>0</b>	*****	9,259 2 1 10,338 15 3 9,248 5 7 10,339 13 5 8,050 3 11 8,116 14 11	11,734 13,223	0 12 6 0 14 2 0 11 2 0 11 8 0 6 1 0 9 7	8 7 8 9
17,740 14 3	4,716 15 2	£ <b>5,</b> 403 7 2	•€,557	617 9 5	41,072 12 2	13,713 1 7	*****	55,403 7 2	85,685	0 10 4	
3,420 10 0 3,403 6 9 3,793 9 0 3,352 5 0 3,948 6 0 17,918 4 9	152 14 0 9 15 0 367 0 0 419 11 0	12,548 13 10			7,184 1 8 6,953 15 8 10,625 6 8 11,461 8 1 9,933 2 6 46,208 2 7	960 0 0 1,923 7 2 1,199 10 6	*****	8,020 0 5 7,913 15 8 12,548 13 10 12,661 2 7 11,223 2 6 52,367 3 0	17,450 20,996 26,718 16,915	0 6 8 0 7 8 0 9 7 0 7 7 0 10 7	18 13 14 15
2,930 9 6 3,173 12 0 1,265 4 0 2,992 0 0 6,950 14 3 425 4 0	148 8 0 43 8 3 16 3 6	5,663 7 5 4,623 12 3		805 10 7	7,917 7 0 4,974 0 5 4,178 4 0 8,741 8 9 10,788 13 1 654 12 0	689 7 0 445 8 3 1,246 12 8 550 1 0	*****	12,745 7 8 5,663 7 6 4,623 12 3 9,988 5 6 11,939 1 1 960 6 7	7,346 4,456 16,569 20,242	0 9 3 0 12 4 1 0 7 0 9 8 0 9 0 0 8 11	17 18 19 <b>2</b> 0
15,727 11 9	650 10 8	45,320 8 5		305 10 7	37,251 13 3	7,760 0 7		45,820 8 5	72,361	0 10 0	
1,326 8 6 549 3 9 2,497 12 0 479 8 6	4 14 6		•••••	5,114 8 11 1,706 12 4 7,040 8 0 1,821 1 6		2,930 14 2 425 0 0		8,045 7 1 2,131 13 4 7,040 8 0 1,821 1 6	2,967 8,868	0 8 3 0 11 6 0 12 8 0 14 1	23
4,853 0 9	170 15 6	19,038 12 11		15,682 14 9	• • • • • • • • • • • • • • • • • • • •	3,355 14 2		19,038 12 11	29,425	0 10 4	
1,855 15 6 1,624 12 0 1,300 11 0 1,456 15 0 623 14 0	10 0 0	7,562 9 4 6,489 3 2 5,102 13 2 5,024 13 11 2,201 11 1 26,331 2 8		7,118 9 4 6,127 8 2 4,840 3 11 5,024 13 11 2,201 11 1 25,312 9 5	*****	444 0 0 312 0 0 262 9 3	•••••	7,562 9 4 6,439 3 2 5,102 18 2 5,024 13 11 2,201 11 1	23,469 5,226 2,761	0 8 2 0 5 3 0 3 6 0 9 9 0 12 9	28 <b>29</b>
2,286 14 0	30 <b>15 0</b>		****		6,684 4 11	985 14 0	*****	7,620 2 11	10,701	0 11 5	32
2,885 9 0 658 13 0 1,386 7 0			******	9,297 6 6 3,293 5 1 4,914 15 0		390 0 0 683 12 0 1,260 0 0		9,687 6 6 3,977 1 1 6,174 15 0	18,074 9,081	0 8 7 0 7 0	
7,917 11 0		27,459 9 6	*****	17,505 10 7	6,634 4 11	<b>3,3</b> 19 10 0		27,459 9 6	12,878 50,734	0 7 8	
1,558 5 0 2,198 5 0 812 9 0 1,609 4 0	34 0 0	5,197 4 1 6,965 1 9 3,103 9 0 5,178 2 0		4,757 12 1 6,158 1 3 3,103 9 0 4,220 2 0		439 8 0 807 0 6 958 0 0	•	5,197 4 1 6,965 1 9 9,103 9 0 5,178 2 0	10,626 12,531 7,771 11,669	0 7 10 0 8 11 0 6 5 0 7 1	36 37 38 39
6,178 5 0	34 0 0	20,444 0 10	•	18,239 8 4		2,204 8 6		27,444 0 10	42,597	0 7 8	
3,3 <b>3</b> 6 4 0 3,8 <b>9</b> 0 4 0		9,632 10 9 12,127 5 11		5,071 0 0 9,432 1 4	*****	******	4,561 10 9 2,695 4 7	9,632 10 9 12,127 5 11	15,988 15,002	0 9 8 0 12 11	40
6,716 8 0	217 0 7	21,760 0 8		14,508 1 4	••••	*****	7,258 15 4	21,760 0 8	30,990	0 11 3	
*****	18,365 9 5 2,383 7 0	28,637 1 0 2,388 7 0	******	28,637 1 0 2,388 7 0	*****	*****	** ***	28,637 1 0 2,388 7 0	***	•••	42
88,853 15 0		316,417 10 2		125,931 6 5	144,175 5 11	39,053 14 6	7,256 15 4	3,16,417 10 2	5,29,775	0 9 7	
		tion ; erformed									

vaccination and re-vaccination performed by special staff only.

Municipality have been included in the cost. Out of 15, only 1 Vaccinator employed in Rangoon Cantonment was paid by Government.

for supervising vaccination and vital statistics work, 1 Superintendent in charge of Vaccine Depot, Rangoon Municipality, 1 Assistant Director, State, 46 Supervisors of Vaccination and 3 Head Vaccinators.

B.—DISPENSARY

## STATEMENT No. III-Showing Dispensary Vaccination in the

0.		Di	stricts		1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Number of dispensaries in each district to which a vaccinator is attached.	Average number of vaccinators attached to dispensaries during the year.	Total number of persons vaccinated,	Average number of persons vaccinated by each vaccinator.	Total.
)		(	2)			(3)	(4)	(5)	(6)	(7)
	-	ARAKAN	Divisi	on.						
2 3	Akyab Hill Districts Kyaukpyu			***	***	*****	*****	35 292	•••••	127
4	Sandoway	•••	•••	•••	•••	*****	*****			•••••
				Totai	***			927		131
5	Rangoon	Pagu I								
3 8 7	inseln Hanthawadd	•••	•••	***	•••	*****	******	8 54	•••••	8 43
7 8 9	Pegu	•••	•••	•••	•••	*****	•••••	2,100		*****
10	Tharrawaddy Prome	•••	***	***	•••	*****	******	2,300	•••••	977
				Total	•••			2,162		1,028
		RRAWADD	V Divi	810N•						
11	Ma-ubin Pyapôn	•••	•••	•••	•••			74		1
13 14	Bassein Henzada	•••	•••	***	•••	* *****	******	909 143		30
15	Myaungmya	•••	•••	140	•••	*****		110		50
	7	ENABBERI	sa Dina	Total	***			638		81
16	Amherst			***				123		192
17	Tavoy Mergul	•••	•••	•••		*****	*****	*****		
18	Toungoo	***	•••	•••	•••	*****	•••••	*****		*****
20	Thaton Salween	•••	•••	•••	•••	•••••		** ***	*****	*****
		*		Total	•••		•••••	122		192
		MANDALA	Y Divi	BION.						
23	Mandalay Bhamo	***	•••	•••	•••			80		79
24 25	Katha Myltkyina	•••	•••	***		*****	*****	281	*****	269
26	Putao	•••	•••	•••	•••	*****	•••	1,215		1,169
				Total	•••	*****		1,576		1,517
		SAGAINO	DIVIB	ion.						
27 28 29	Shwebo Sagaing Lower Chind	***	•••	***	***	•••••		84	*****	03
30	Upper Chind	win win	•••	•••	•••	*****	*****	127		127
81	Chin Hills	***	•••	•••	***		•••••	100	••••	îi
		MAGWE	Deve	Tota.	***			911		188
89	Thavetmyo	MAGWE	DIVIBIO							
89 38 34	Thayetmyo Pakôkku Minbu	***	•••	•••	•••	*****	*****	198	*****	198
85	Magwe		•••	***	***	*****	******	11		*****
				Totai	***	*****		209	*****	198
00		MEIRTIL.	A DIVIE	310N•						
36 87 88	Meiktlia Yamèthin	•••	•••	***	•••	*****	*****	19	••••	18
88	Kyauksė Mylngyan	•••	•••	•••	***	•••••	****	•••••		*****
				Total	•••			19	-	18
		SHAN	STATE	8.						
40 41	Northern Sh. Southern Sh.	an States	•••	•••	•••	*****	*****	218		124
					***	•••••	*****	285		194
				Total	•.	•••••	•••••	448	• • • • • • • • • • • • • • • • • • • •	918
		•	G	RAND TOTAL	***			5,810		8,601

## VACCINATION.

## Province of Burma for the year 1921-22 (Paragraph 8).

PRIMARY	VACCINATIO	on.		F	CE-VACCINATIO	· N •	WHICH TI	TAGE OF L CABES IN IE RESULTS KNOWN.	UNKNOW	TAGE OF CASES TO CASES.	
	Successful.		Unknown.	Total.	Successful,	Unknown.	Primary.	Re- vaccina-	Primary.	Re- vaccina-	No.
Under one year.	under six years,	Total of all ages.						tion.		tion.	
(8)	(9)	(10)	(11)	(12)	(18)	(14)	(15)	(16)	(17)	(18)	(19)
 1 8	 <b>2</b> 6 <b>5</b>	3		 31 165	 28 65	52	75:00 98:37	90°32 57°52	 9·15	31.52	1 2 3
9	67	121	4	196	93	52	97.64	64.58	3.05	26.53	4
 1 22	7 15	 8 <b>43</b>	•••		3	8	100.00	100.00	•••	72.73	78
141	457 	678	280	1,123	 5 <b>32</b>	208	9 <b>7</b> ·27	58-14	26.65	18.23	9
164	479	729	280	1,131	585	216	97.46	58.27	27.24	19.05	1
•••	***	1	•••	73	•••	73	100.00	•••		160-00	11
•••	***	***	30	3( <b>9</b> <b>1</b> 13	1	309 112	•••	100.00	100.00	100·00 99·12	18
•••	24	50	30	555	30	524	100:00	100.00	37.68	50·00 94·41	14
	. —						100 00	100 00	57-05	72 31	-
84	35	122	•••	***	•••	•••	<b>10</b> 0·00	•••	•••	•••	11
•••	•••	***	•••	***	•••	***	•••	***	•••	•••	11112
84	35	122	**************************************	•••	***	***	160.00				21
						***	100 00				-
74	25  185	74	10	1		1	94.87	•••	1.27	100.00	2
117	427	259 1,026	136	12 46 	3 21 	5 3	100·00 99·32	42.86 48.84	3·72 11·63	41.67 6.52	2 9 2 2
235	637	1,359	147	<b>5</b> 9	24	9	99*20	48.00	9.69	15.25	
15	27	42	6	31	6	5	95-45	20-69	12.00	14.71	
7	83		8	•••	•••	•••	95.97	***	•••	******	29 28 29 30 31
	63	170	8 2	89	24	14	100.00	92.00	2·36 18·18	15:74	30
				128	30	19	96.05	28.85	5.85	15.45	
91	95		•••	•••		•••	99.49	•••	•••	***	82
•	***	•••	***	11	***	11	***	•••	•••	100:00	33 34 35
91	95	197		11		11	£9°49		•••	100.00	
1	8	13	5	1		1	100.00		2 <b>7</b> ·78	100*00	36
•••	***	***	***	•••		*** ***			•••	•••	37 38 89
1	8	13	5	1	•••	1	100.00		27.78	100.00	59
41 45	56 99	118 185	6 9	89 41	32 13	27 10	100·00 100·00	51.61 41.94	4°84 4°64	30°34 24·89	40 41
86	155	303	15	130	45	37	100.00	48*39	4'72	2846	# A
693	1,563	3,068	492	2,209	758	869	98.68	56.67	13.66	39.34	

# COMPARATIVE STATEMENT No. 1V—Showing the number of persons primarily vaccinated Burma in each of the under

											Pere	ONS PRIMA
Estabile	hments.		Total number.	Number success- fully vac- cinated.	Total number.	Number success-fully vac-cinated.	Total number.	Number success-fully vaccinated.	Total number,	Number success- fully vac- cinated.	Total number.	Number success- fully vac- cinated.
			1912	-13.	1913	-14.	1914	4-15.	1915	-16.	1916	17.
	(1)			(2)	(	3)	- (	4)	(5	)	(	6)
			194 704	174,075	171,608	158,632	163,653	150,189	149,958	139,601	155 <b>,431</b>	144,8 <b>3</b> 6
Government	***	***	184,794	34,275	33,098	31,476	33,005	30,815	82,795	31,123	38,123	<b>34,76</b> 0
Municipal	• • •	· · · · · ·	35,714	171,957	210,401	192,887	192,408	175,418	198,458	184,045	213,420	200,118
Local Funds	•••	***	186,353		6,826	5,751	2,944	2,172	3,390	2,203	10,391	10,025
Native States	***	•••	8,662	7,518		8,077	1,704	1,509	2,849	2,535	2,899	2,320
Dispensary	**	***	5,966	<b>5,51</b> 8	<b>8,5</b> 73		7,544	6,879	7,341	5,520	2,314	878
Other Agencies	**	***	•••	***	•••	***	7,044	0,010	7,032	,,,,,	5,511	
	RMY.		0.0	F0	60	0,	42	30	25	25	10	10
Europeans	•••	•••	62	59	69	84		174	655	513	597	512
Natives	***	**	464	393	255	224	253					
	l'ota	i	422,015	893,798	425,830	395,111	404,553	367,184	395,471	365,565	428,185	393,459

## STATEMENT No. V—Showing particulars of Vaccination verified

							TOTAL NUMBER	RINEPECTED	
No.		Districts.			BER OF PERSONS CINATED.	Assistant   Health or	Director of Public Civil Surgeons.	By Natir or other in	ve Supervisors specting Officers.
				Primary.	Re-vaccinations.	Primary.	Re-vaccinations.	Primary.	Re-vaccination
(:)		(2)		, (3)	(4)	(5)	(8)	(7)	(8)
3 4 5 6 7 8 9 10 11 12 13 14 16 16 17 18 19 20 21 22 28 29 20 31 82 28 38 34 35 36	Kyaukpyu Sandoway Rangoon insein Hanthawaddy Pegu Tharrawaddy Prome Ma-ubin Pyapon Bassein Henzada Myaungmya Amherst Tavoy Mergul Toungoo Thaton Salween Mandalay Bhamo Katha Myitkyina Putao Shwebo Sagaing Lower Chindw Upper Chindw			4,865 8,686 11,967 12,800 16,503 21,302 18,963 17,727 19,824 27,370 15,813 6,237 16,237 18,654 11,502 17,525 2,893 9,108 4,663 14,200 15,186 12,012 8,178 1,5186 12,012 8,178 1,529 1,012 8,178 1,012 1,012 8,178 1,012	5,852 1,006 15,740 910 1,668 1,980 5,593 2,257 2,681 1,117 5,421 2,039 4,062 17,738 2,83 3,462 8,384 4,800 584 4,963 850 2,115 258 22 2,277 6,858 14,225 504 577 3,572 5,414 159 926 2,378	330 827 692 2,621 1,619 1,915 1,794 1,925 1,646 2,628 93 1,833 525 1,992 2,202 803 161 1,596 148 1,056 584 851 618 43 299 2,877 7,146 1,271 627 4,496	97 137 148 25 128 1:6 356 87 263 189 39 7 233 1,510 £02 633 13 465 66 87 260 151 17 212 1,934 6,100 23 89 60 24 64	3,160 7,121 10,029 8,734 11,689 12,868 6,197 14,693 14,426 11,798 11,515 9,170 10,284 5,049 2,103 8,078 11,901 8,900 6,313 9,764 7,053 6,672 7,382 6,871 600 5,193	497 8,278 406 708 932 1,786 1,211 1,798 514 2,396 187 2,329 11,128 1,632 2,489 1,660 2,041 1,940 210 1,379 46 1,282 4,583 10,390 479 2,110 1,815 14 581 1,340
37 88 39 40 41	Yamèthin Kyauksè Myingyan Northern Shai Southern Shai	 n States n States	•••	12,865 9,720 12,836 17,391 16,018	2,683 5,137 891 1,563 815	3,970 1,429 728 1,745 224	2,094 1,962  1,054	7,500 2,943 9,806 1,134 14,610	1,147 8,037 161 102 114
		Grand	Total .	494,839	160,990	54,162	19,411	276,121	71,603

and the number of those persons who were successfully vaccinated in the Province of mentioned official years.

RILT VACCINATED.

	Number successfully vaccinated.	Total number.	Number uccessfully accinated.	number 8	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.			
Establishment	1-29.		0-21.		9-20.		018-19.			1 <b>917-1</b> 8.			
(12)	11)	(		(10)	(9)		(0)		····				
Government.	160,011	174,549	152,910	165,491	162,448	179,204	138,337	146,541	143,533	155,824			
Municipal.	38,460	40,478	33,224	8 <b>5,</b> 519	35,978	38,604	85,269	37,290	30,953	33,500			
Local Funds.	247,532	<b>262,3</b> 88	256,940	272,949	239,580	257,218	216,462	231,214	212,064	227,468			
Native States.	8,695	10,234	5,155	7,280	5,015	9,177	7,349	7,854	7,159	11,186			
Dispensary.	3,068	8,601	1,565	2,016	4,781	7,220	1,764	2,063	1,307	1,523			
Other Agencies	3,285	9,589	217	267	371	898	803	304	402	705			
Army.													
Europeans,	9	11	46	58	24	28	83	24	11	12			
Natives.	9	9	463	1,342	27	67	431	482	846	415			
Total.	461,069	494,859	450,520	484,922	448,249	491,916	399,938	425,772	895,772	480,633			

by Inspecting Officers during the year 1921-22 (Paragraph 12).

		Dancas	ESSFUL OF		AGE OF CASES I		TOTAL	SPECTIONS TO	PERCENTAGE OF IN								
No		PERCENT SUCCESS R BY VACC	s Supervisors other og Officers.	OF	Director of alth or Civil geons.	Public Hoa	e Supervisors other og Officers.	07	alth or Civil	Assistant Director of Public Health or Civil Surgeons.							
	Re-vaccina- tlons.	Primary.	Re-vaccina-	Primary.	Re-vaccina-	Primary.	Re-vaccina-	Primary.	Re-vaccina- tlons.	rimary.							
(1	(18)	(17)	(16)	(15)	(14)	(13)	(12)	(11)	(10)	(9)							
11 11 11 11 11 11 11 11 11 11 11 11 11	76.96 78.46 53.69 28.68 48.26 15.03 50.29 87.31 67.78 29.00 89.29 84.96 59.65 31.71 55.29 45.91 57.74 88.98 90.27 65.35 41.78 54.17 68.80 39.59 59.80 77.27 67.67 74.56 83.51 84.62 57.96 59.64 15.69 62.50 45.77 74.59 58.79 58.79	98°30 87'77 96°31 93°39 99°32 99°56 99°57 99°56 99°83 99°86 97'70 99°88 98°59 99°61 83°44 99°30 98°67 95°68 98°52 58°88 98°52 58°88 98°52 58°88 98°54 98°56 98°56 99°72 99°72 99°74 99°74 99°74 90°87	49·05 22·54 48·24 99 30·28 33·80 60·13 32·15 26·47 34·24 55·63 84·22 56·59 37·49 48·03 30·49 26·81 66·19 58·66 70·48 33·94 45·65 56·55 69·56 69·56 69·56 69·56 69·56 69·56 69·32 7 66·16 17·13 92·86 68·33 72·46 55·10 93·61 93·61	94·87 96·27 99·92 98·85 99·79 99·84 99·74 89·74 99·84 99·51 92·07 99·15 93·66 96·90 98·26 87·30 93·92 93·89 91·35 98·29 99·12 93·89 91·36 97·56 95·90 96·88 99·83 99·12 93·89	96-95 41-24 26-28 22-97 12-00 33-61 27-78 60-11 100-00 34-60 79-37 100-00 85-71 72-53 43-71 76-49 57-19 100-00 78-76 31-52 81-61 40-38 52-98 100-00 56-94 78-76 87-62 52-17 74-16 15-00 7-83 95-31 76-20 90-21	100-00 96-36 96-36 92-14 100-00 97-28 98-52 98-52 99-44 97-67 94-71 99-85 100-00 98-74 96-38 96-69 96-50 85-48 100-00 99-35 94-59 100-00 88-18 96-83 98-54 98-02 03-98 99-58 99-58 99-58 99-52 92-82 93-57 99-29 96-14 93-30 100-00 97-63 99-79 99-78 99-78 99-78	4.08 49.40 52.59 44.62 44.45 47.07 31.9.) 53.66 67.06 46.02 44.20 9.17 57.81 62.74 56.61 71.89 49.06 42.52 33.17 24.71 65.20 17.83 56.30 66.88 73.04 95.04 59.07 38.62 8.81 62.74 56.53 42.75 59.12 38.62 6.53 18.54	72·89 8i·98 83·81 68·23 70·10 60·41 37·17 78·73 8i·38 59·51 42·07 63·04 85·09 49·72 49·75 63·79 50·78 18·35 66·12 18·66 44·46 64·30 58·72 74·24 76·66 36·98 5•80 40·33 83·60 58·30 79·11 75·43 6·52 91·41	55·16 1·66 13·62 ·94 2·75 7·81 6·36 6·36 6·36 3·85 9·81 16·92 ·71 ·34 5·74 8·51 17·41 18·23 ·38 9·69 11·30 ·10·24 12·29 58·53 77·27 9·31 28·20 42·88 4·56 15·42 ·11 15·09 6·91 · 78·05 38·19 · 67·43	5·16 2·82 18·95 7·99 16·89 19·65 11·60 8·42 13·77 8·82 14·82 -47 6·70 3·32 12·23 87·28 7·16 -603 20·19 9·34 18·25 63·24 2·11 18·95 59·49 2·21 9·27 7·60 12·29 4·88 46·75 80·86 88·41 5·90 10·08 1·40							
	53.48	98-07	61-50	99.63	77.18	79-29	44*48	55.80	12.06	10-94							

and the same of the same

APPENDIX A.

Statement showing the ratio per 10,000 successfully vaccinated and the mortality from small-pox by quinquennial periods for Lower Burma only.

	Official ye	ar.		Ratio per 10,000 successfully vaccinated.	Quinquennial mean.		Calenda	ar y <b>ear.</b>		Ratio per 10,000 of mortality from smail-pox.	Quinquennial mean.
	(1)			(2)	(8)		(4)	)		(5)	(6)
1906-07	***	***		8 <b>57•6</b> 5	5	1906				14*69	`
1907-08	***	***	•••	294.95		1907	***	***	•••	2.87	
1908-09	***	•••	•••	289.84	805.89	1908		***	***	1.89	4.76
1909-10	***	•••	•••	800.97		1909	•••	•••		1.57	
1910-11	•••	•••	•••	288-91	]	1910	***	***	•••	3.27	•
1911-13	***	***	•••	896.05	)	1911	•••	***	••	9.13	)
1912-13	46.7	•••		360 <b>•5</b> 6		1912	•••	•••		9.61	
1918-14	***	•••	• • •	880.31	367-28	1913	•••	***		2.87	4.47
1914-15	***	•••	•••	339°06		1914	***	***	•••	•39	
1915-16	***	***	•••	360 • 4 1	J	1915	***	•••		•33	J
1916-17	***	***	***	404.85	1	1918	•••	•••		1.06	)
1917-18	***	•••	•••	389 20		1917		•••		•89	
1918-19	***	***	***	422.32	<b>434</b> ·65	<b>191</b> 3	***	••		1.18	1'75
1919-20	***	***		461.63		1919	•••			2:31	
1920-21	•••	•••	•••	493-29	J	1920	•••	***		3•3 <b>5</b>	
1981-23	***	•••	•••	454.04	•••	1921	***	•••	}	.71	

#### APPENDIX B.

Statement showing the number of vaccinations performed in Municipal towns and notified areas (to which Vaccination Act has been extended) on children under one year of age (Paragraph 7).

		Towns.			Number of births during the year 1921-22.	Number of deaths among children under one year during the year 1921-22.	Number of successful operations on children under one year during the year ending 31st March 1922,	Date of extension of Vaccination Act into towns.			
	(	(1)			(2)	(8)	(4)	(8)			
kyab	••	•••	4 * *		566	167	588	August 1883.			
<b>Vaukpyu</b>	•••	***	***	***	102	34	27	April 1894.			
andoway		•••	***	***	105 6,178	9 1,990	5,339	September 1890.			
Rangoon	***	•••	***	•••	209	79	166	April 1884. 14th March 1918.			
nsein	•••	***	•••		219	34	110	29th January 1913.			
Syriam Ph <b>a</b> ngu a		***	***	•••	226	47	175	3rd March 1914.			
Phongwa Pegu	• • •	•••	***		516	112	463	March 1893.			
Nyaunglèbin		•••	***	•••	206	56	≥06	29th March 1910.			
Th <b>ô</b> nzờ	***	•••	***	***	219	ა <u>ზ</u>	163	October 1897.			
Zigôn	***	•••	***	***	171 <b>1</b> 89	36 41	1 <b>30</b>	11th May 1914.			
Letpadan	***	***	***		210	51	156	January 1897. February 1897.			
Gyobingauk	•••	***	***	•••	98	24	78	11th May 1914.			
Minhla Nattalin		100	***	•••	79	23	78	11th May 1914.	1		
Prome	144	•••	***		680	65	547	June 1890.			
Paungdė		•••	***	•••	392	114	241	August 1890.			
Shwedaung		•••	***	•••	278	61	93	10th September 1917.			
Ma-ubin	***	***	***	•••	167 198	33 20	148 137	October 1891.			
andoon	•••	***	•••	•••	168	25	138	January 1892. 9th July 1909.			
Danubyu Duanan	***		***		193	19	171	November 1904.			
Pyapon Svojklat	***	•••	***		197	46	131	15th December 1904.			
Kyaiklat Bassein	***	***	***		1,002	3 <b>36</b>	646	September 1888.			
Ngathainggyaung	**1	•••	***		182	29	116	February 1890.			
Henzada	100	***	***	•••	670	163	391	January 1889.			
Myanaung	***	•••	**		18 <b>3</b> 203	40 28	1 <b>57</b> 190	July 1889.			
(vangin	***	***	***	•••	203 147	28 41	101	August 1894. June 1894.			
Myaungmya	***	***	•••	***	286	50	55	27th April 1907.			
Vak∂ma Moulmein	***	***	***		1,349	189	1,121	August 1885.			
Kawkarei <b>k</b>	***	***	***		212	73	70	September 1914.			
Cavoy	***	***	***	•••	857	205	862	December 1889.	1		
Mergui	***	100	***	***	410	138	806	October 1891.			
Chaton	•••	***	***		396	99 43	3 <b>5</b> 5 8 <b>2</b>	October 1891.			
<b>Cyaik</b> to	***	***	***	•••	232 457	79	273	March 1897,			
Coungoo	***	-••	•••	•••	152	10	146	May 1889. January 1890.			
Shwegyin	***	149	•••	***	122	<b>2</b> 6	344	January 1920.			
Pyu M <b>an</b> dalay	•••	**	***		6,339	2,059	6,298	August 1891			
Maymyo		••	***		417	₹9	296	October 1912.			
Bhamo	174	•••	`		130	17	148	26th October 1894.			
hwebo	•••	•••	***		250 449	119 8 <b>5</b>	19 <b>1</b> 338	June 1894.			
againg	***	***	***		353	77	319	April 1894. March 1893.			
Mônywa Chavetmyo	•••	•••	***	***	225	87	198	May 1889.			
Chayetmyo Lllaumyo	***	* ***	•••	:::	248	25	281	May 1901.			
akokku	•••	420	***	***	594	137	493	April 1892.			
linbu	•••	***	•••		202	40	102	March 1896.			
Salin	• • •	•••	***		223	45	153	March 1896.			
Magwe	•••	***	•••	[	227 191	61 49	148 111	10th March 1913.			
Caungdwingyi	***	***	+00	*** 1	247	63	232	February 1893. 10th March 1913.			
lenangyaung Meiktila	***	•••	***	***	243	55	240	June 1906			
Meikula Yamèthin	***	•••	***	***	199	51	184	February 1892.			
Pvinmana	•••	***	***		420	131	414	November 1891.			
yawbwe	•••	999	***		96	36	185	May 1912.			
(yauksè		39	***	•••	223	36	149	May 1894.			
A martin or one of the					490	147	<b>45</b> 0	September 1801.			
lyingyan		***	***	•••							
lyauug-u	004	000	•••	•••	225	26	<b>2</b> 03	30th August 1921,			

#### APPENDIX C.

Diagram showing the Proportion of Population protected during the seven official years from 1915-16 to 1921-22 and the Death-rate from Small-pox during the calendar year 1921 in districts where registration is in force.

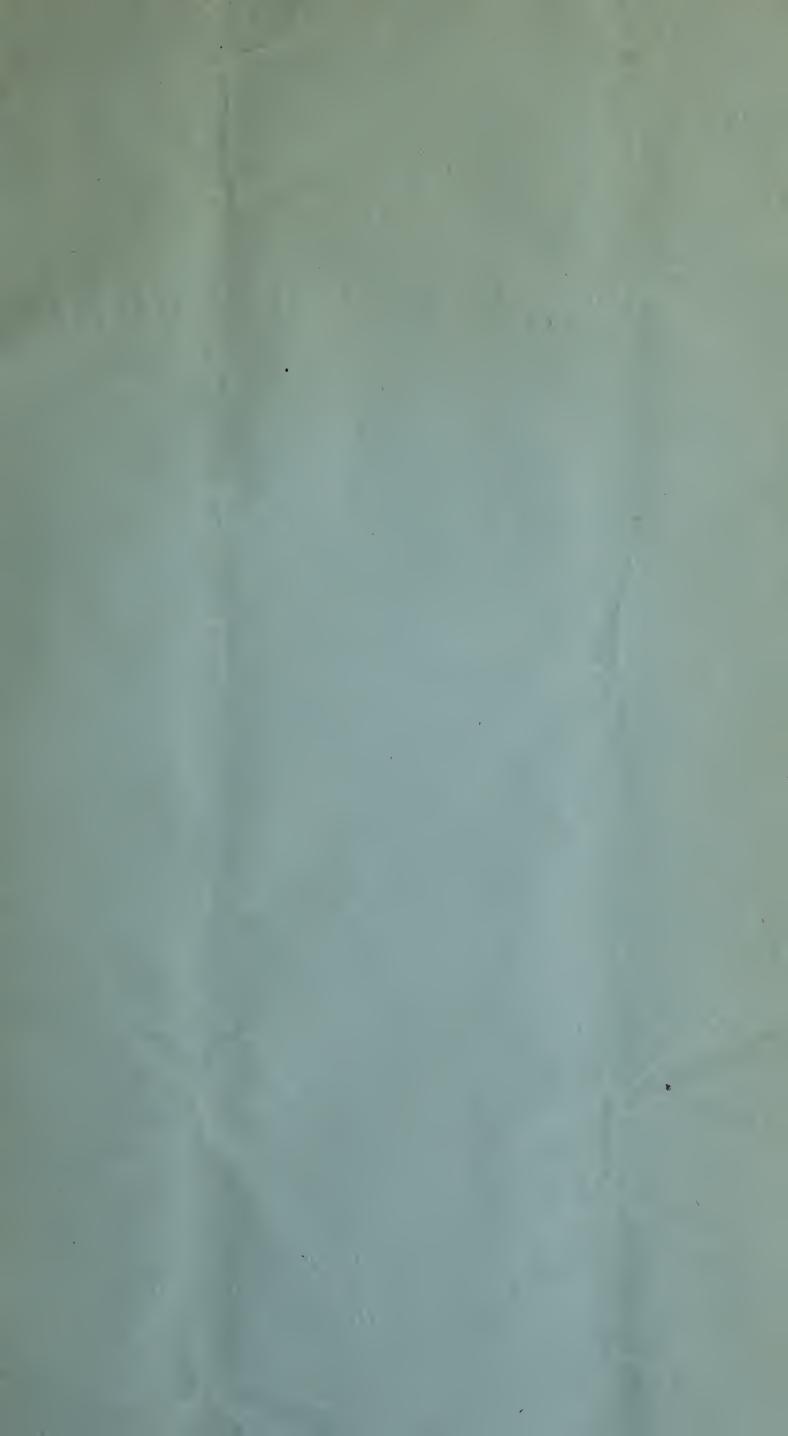
																	- 1				_				<u></u>			_								1		1	# 1	• 1	No
Proportion of population protested per 10,000.	Akyab.	Hill Distracts of Araban.	Kyaukpyu.	Sandoway	Rang oor.	Insem.	Hanthawaddy.	Pegu.	Tharrawaddy.	Prome.	Ma-ubin.	Pyapon.	Bassein.	Henzada.	Myaungrays.	Amherst.	Ťavoy.	Mergui.	Toungoe.	Thatôn.	Salween.*	Mandalay.	Bhamo.*	Katha.*	Myitkyina.*	Shwebo.	Sagaing.	Lower Chindwin.	Upper Chindwin.*	Chin Hills.*	Thayetmyo.	Pakôkku.	Minbu.	Magwe.	Meiktila.	Vamèthin.	Kyauksè.	Myingyan,	Northern Shan States	Southern Shan States.	Ratio of deaths from small-pox per 10,000 of population.
Prop	1	3	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	-33	34	35	36	37	38	39	40	Rat sma pop
\$,000 4,000 4,500 4,500 4,400 4,200 4,200 4,200 4,200 3,000 3,800 3,700 3,600 3,200 3,100 3,000 2,900 2,800 2,800 2,800 2,800 2,800 2,800 1,900 1,500 1,400 1,500 1,400 1,000					s mannimummummummummmmmmmmmmmmmmmmmmmmmmmm				• annuminaminaminaminaminaminaminaminaminamina														77	DA -		124												38	~~		23'00 22'00 21'00 20'00 19'00 18'00 17'00 16'00 15'00 11'00 10'00 9'00 8'00 7'00 6'00 5'00 4'00 3'00 2'00 1'00 0'50 0'50 0'40 0'50 0'50 0'40 0'30 0'26 0'19 0'16 0'15 0'14 0'13 0'12 0'11 0'10 0'09 0'06 0'07 0'06 0'07 0'06 0'07 0'06 0'07 0'06 0'07 0'06 0'07 0'06 0'07 0'06 0'07 0'06 0'07

Indicates proportion of population protected per 10,000,

Indicates rates of deaths from Small-pox per 10,000 of population.

Registration of vital statistics is not carried out in these districts.







## NOTES AND STATISTICS

ON

# VACCINATION IN BURMA

FOR THE YEAR 1921-22



## RANGOON

OFFICE OF THE SUPERINTENDENT, GOVERNMENT PRINTING, BURMA
1922

